

Hazardous Substance Exposure and Treatment Simulation

Grades

Secondary

Subjects

Science, Drama, Health

Type of Lesson Plan

Project

Suggested Duration

Depends on teacher's schedule

Materials

- Left up to the students

Objectives

TLW...

- Perform research on the exposure pathways, health effects, and treatment of patients exposed to hazardous substances.
- Work with a group to develop a script, action, and props for a simulated treatment of a patient or patients exposed to a hazardous substance.

Set

Show clips from any number of syndicated medical/hospital dramas of a treatment scenario, preferably one dealing with hazardous materials exposure.

Have the students identify the elements that make the scene believable/unbelievable.

Instructional Input

Scenes like these can be believable if people put enough research into the actual facts of the situation they are trying to create. Writers for these hospital dramas do not simply make up scenes without any input. They have access to real medical professionals as advisors. They also research their topics before trying to film them for an audience.

Your task is to develop a scene, a mock response to a hazardous substance exposure event. The event can be a serious medical emergency for an individual or a group of individuals. It could also be a simulation of a simple doctor's visit. As long as the scene focuses on an exposure to a

hazardous substance, the health impacts of the exposure, and the medical treatment following the exposure.

The purpose of this exercise is to educate yourselves and your classmates about exposure pathways, health effects of, and treatment of a hazardous substance exposure.

See “Hazardous Substance Poster” (lesson # 9) and “Develop an Educational Brochure” (lesson # 21) lesson plans for ideas on how to introduce students to hazardous substances, their health effects, and treatment of people who have been exposed to hazardous substances.

Your task is to develop a script and act it out in front of the class, or film it on location and show the tape to the class. The scene will deal with an exposure of a patient or patients to a hazardous substance, the patient’s symptoms and health impacts as a result of the exposure, treatment, and prognosis for recovery.

Your cast of characters should include a patient(s), witnesses if appropriate, and medical professionals (doctors, nurses, paramedics, and ER staff). Your set, location, and costumes are up to you. You are required to hand in a complete script along with your performance.

Remember that the goal is to educate your audience about the implications of exposure to the hazardous substance you choose. Your performance could save a life!

Evaluation

Unlike the other lesson plans in this series, a rubric will not be provided for this lesson. It will be up to the individual teacher to develop evaluation for this lesson.

Closure

Discuss what worked and what did not in each scene as well as ways to improve it. Did students gain an appreciation for the health challenges posed by exposure to hazardous substances?

Resources

Provide the students with the following links as research sources:

Excellent links to many hazardous substances identified by the EPA.

<http://www.epa.gov/ebtpages/pollutants.html>

ATSDR’s ToxFAQs – extensive fact sheets on many hazardous substances.

<http://www.atsdr.cdc.gov/toxfaq.html>

United States National Library of Medicine. Health effects and treatment for exposure to hazardous substances.

<http://www.nlm.nih.gov/pubs/factsheets/hsdbfs.html>